

REMARKS/ARGUMENTS

Status of Claims

Claims 1, 19 and 41 have been amended.

Claims 5 and 23 have been canceled.

As such, claims 1-4, 6-22 and 24-43 are currently pending in this application.

Applicants hereby request further examination and reconsideration of the presently claimed application.

Claims Rejection – 35 U.S.C. § 102

Claims 1-6, 9-16, 19-24 and 27-40 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Thanh, et. al. U.S. Patent Number 6,054,409 hereinafter *Thanh*. Claims 2-6, and 9-16 depend from claim 1, and claims 24-40 depend from claim 19, thus these claims stand or fall on the application of *Thanh* to currently amended independent claims 1 and 19. According to MPEP § 2131, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” The Applicants submit that *Thanh* fails to teach each and every element as set forth in currently amended independent claims 1 and 19 and consequently fails to anticipate claims 2-6, 9-16, 20-24 and 27-40.

The Examiner remarked that “Thanh discloses a catalyst for the selective hydrogenation of acetylene wherein the silver is distributed throughout the catalyst (column 4 lines 61-64)”. Referring to column 4 lines 61-64, *Thanh* specifically discloses “The average distribution of the elements in the catalyst grains is shown in Figure 1. These analyses show that **more than 80% of the silver** and almost all of the palladium were concentrated in a volume delimited by **a sphere with radius $r_1=2\text{mm}$ and a sphere with radius r_2 of 1.6 mm.**” (emphasis added) Further, *Thanh* teaches the importance of the silver remaining at the **periphery** of the catalyst. Specifically,

Thanh discloses “The group 1B element, in particular silver, is introduced in such a manner that it **remains concentrated at the periphery** of the spherules or extrudates of the support” (emphasis added). Applicants disclose in claim 1

“A catalyst for the selective hydrogenation of acetylene, comprising:

a support selected from the group consisting of alumina, titania, zirconia, zinc aluminate, zinc titanate and mixtures thereof, wherein the support has a uniformly round external surface, a surface area in the range of about 3 to about 10 square meters per gram, a pore volume of about 0.24 to about 0.64 cubic centimeters per gram and has an average pore diameter from about 600 Angstroms to about 5000 Angstroms;

palladium in the range of about 0.01 to 1.0 weight percent of the catalyst, wherein substantially all of the palladium is concentrated in a skin periphery of the catalyst, wherein the skin has a thickness less than about 400 microns; and

silver in the range of about 0.5 to 10.0 times the weight of the palladium, **wherein the silver is distributed throughout the catalyst.**”

and again in claim 19

“A method for the treatment of a gaseous mixture comprising acetylene, which method comprises selectively hydrogenating the acetylene therein by contacting the mixture together with hydrogen with a catalyst;

wherein the catalyst comprises a support selected from the group consisting of alumina, titania, zirconia, zinc aluminate, zinc titanate, and mixtures thereof, wherein the support has a uniformly round external surface, a surface area in the range of about 3 to about 10 square meters per gram, a pore volume of about 0.24 to about 0.64 cubic centimeters per gram and has an average pore diameter from about 600 Angstroms to about 5000 Angstroms;

wherein the catalyst comprises palladium in the range of about 0.01 to 1.0 weight percent of the catalyst, wherein substantially all of the palladium is concentrated in a skin periphery of the catalyst, wherein the skin has a thickness less than about 400 microns; and

wherein the catalyst comprises silver in the range of about 0.5 to 10.0 times the weight of the palladium, **wherein the silver is distributed throughout the catalyst.**”

As such, the catalyst and processes described by the Applicant is not anticipated by *Thanh* which reports a catalyst having silver concentrated in the periphery and teaches away the use of a catalyst having silver distributed throughout the material.

Claims Rejection – 35 U.S.C. § 103

Claims 1, 6-8, 17, 18, 25, 26, and 41-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheung et. al U.S. Patent No. 5,475,173, hereinafter *Cheung*, in view of *Thanh*, alternatively in view of *Thanh* and Likins et.al. U.S. Patent No. 2,946,829, hereinafter *Likins*.

Applicants respectfully submit that the prior art of record does not establish a *prima facie* case of obviousness as to the pending claims. According to MPEP 2142, three basic criteria must be met to establish a *prima facie* case of obviousness:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

Similarly, the fact that the Examiner has the burden of proof with respect to the elements of the *prima facie* case of obviousness is also well defined in MPEP 2142:

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

The Examiner has not met the burden of establishing the *prima facie* case of obviousness because *Cheung* does not teach or suggest each and every element recited in the amended claims. Assuming for sake of argument that the combination of *Cheung* in view of *Thanh* or in view of *Thanh* and *Likins* is proper (and without conceding such), the Examiner has nonetheless failed to establish a *prima facie* case of obviousness as such a combination does not teach or suggest all of the claim limitations of the amended independent claims. Claims 6-8, 17, 18, 25, 26 and 42-43

each depend from and incorporate the limitations of currently amended independent claims 1, 19 and 41. The primary reference, *Cheung* does not disclose each and every element of currently amended independent claims 1, 19 and 41, and more specifically does not disclose an average pore diameter of from about 600 Angstroms to about 5000 Angstroms. Furthermore, the secondary references are not cited by the Examiner for the purpose of providing such missing elements of currently amended independent claims 1, 19 and 41. Thus, Applicants respectfully submit that claims 1, 6-8, 17, 18, 25, 26, and 41-43 are patentable over *Cheung* in view of *Thanh* or in view of *Thanh* and *Likins*.

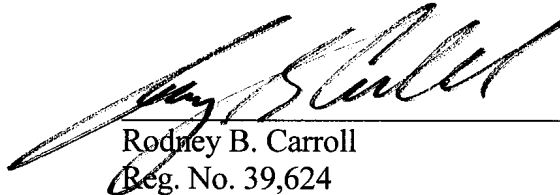
CONCLUSION

Consideration of the foregoing amendments and remarks, reconsideration of the application, and withdrawal of the rejections is respectfully requested by Applicants. No new matter is introduced by way of the amendment. It is believed that each ground of rejection raised in the Office Action dated December 28, 2006 has been fully addressed. If any fee is due as a result of the filing of this paper, please appropriately charge such fee to Deposit Account Number 50-1515 of Conley Rose, P.C., Texas. If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore.

If a telephone conference would facilitate the resolution of any issue or expedite the prosecution of the application, the Examiner is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,
CONLEY ROSE, P.C.

Date: 3-26-07


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